from reducing prices (and we are not aware of any suggestion in the FNPRM that this is the FCC's goal), there would be obvious anticompetitive consequences of discouraging legitimate price competition.

78. While the FCC has suggested in the past that tariffs supported by detailed cost data may help identify predation, ⁶³ such behavior should be readily identifiable in the absence of tariffs. For example, the execution of a price squeeze requires that ILECs charge retail prices at a sufficiently low level that an equally efficient rival will be driven from the market. It is likely that any such attempt could be readily detected by ILECs' rivals and regulators, especially given access charge reforms in recent years that have greatly lowered usage sensitive access charges (while raising fixed charges). ⁶⁴ Given what we understand to be the relatively low marginal (or variable) costs facing long distance suppliers, execution of a price squeeze would require that the ILEC set a very low retail price, which should be readily identifiable.

B. INAPPROPRIATE APPLICATION OF DOMINANT CARRIER REGULATION CAN ADVERSELY AFFECT COMPETITION

79. The FCC has correctly acknowledged in prior proceedings that there are significant costs associated with establishing tariffs and other regulations and that inappropriate application of dominant carrier regulation may adversely affect competition.

[T]he fact that these measures might help to deter a BOC or its interLATA affiliate from engaging in certain types of anticompetitive conduct is not, by itself, a sufficient basis for imposing dominant carrier regulations on the BOC interLATA affiliates. We should also consider whether and to what extent these regulations would dampen competition...⁶⁵

^{63. &}lt;u>Id</u>., ¶87.

^{64.} FCC, CALLS Order, FCC 00-193, May 31, 2000 ¶¶29-30; FCC, Trends in Telephone Service, May 2002, Table 1.2.

^{65.} LEC Non-Dominance Order, ¶ 87.

- 80. The FCC has previously found that tariffing requirements can harm competition by facilitating tacit collusion through the exchange of pricing information. ⁶⁶ The FCC also recognizes that tariffs encourage ILECs' rivals to challenge ILECs' rates "in order to impede [BOCs'] ability to compete. ⁶⁷
- 81. The FCC has found, correctly in our view, that these regulations can deter competition in a variety of additional ways, including (i) discouraging the introduction of innovative new service offerings; (ii) reducing the ability of firms to engage in price competition, including offering secret discounts; (iii) liming the ability of firms to rapidly respond to changes in market conditions; and (iv) deterring firms from developing customer-specific service offerings. 68

VI. CONCLUSION

- 82. Permitting BOCs and independent ILECs to integrate their long-distance and local exchange operations will not adversely affect competition. As a result, there is no economic basis for imposing dominant firm regulation on BOCs or independent ILECs.
- 83. Competition in the provision of long distance service has increased dramatically since 1995 when the FCC determined that AT&T should not be subject to dominant carrier regulation.
 - BOCs' in-region share of wireline long distance service is expected to remain
 well below AT&T's 1995 share and, on a national basis, each BOC is expected to
 account for less than 10 percent of wireline services.

^{66.} Id., ¶89.

^{67. &}lt;u>Id</u>.

^{68.} Policy and Rules Concerning the Interstate, Interexchange Marketplace, 11 FCC Rcd. 20, 730 at ¶¶23, 53.

- Competition from wireless services, e-mail and instant messaging as well as
 massive increases in industry capacity -- has resulted in large declines in wireline
 long distance usage and declining prices.
- 84. In addition, ILECs would not be able to harm competition in the provision of long distance service by manipulating access to their local networks in the absence of structural separation regulations.
 - Elimination of structural separation rules does not alter the ability of customers,
 rival long distance providers or regulators to detect discrimination and thus does
 not affect BOCs' incentive or ability to engage in non-price discrimination.
 - There is no basis to conclude that elimination of structural separation rules would enable ILECs to engage in a predatory price squeeze. Predation is rarely a profitable strategy and its is especially unlikely in the telecommunications industry because entry (or re-regulation) would preclude recoupment.
 - There is no basis to conclude that elimination of structural separation rules would enable firms to fund predation, or even evade regulation, by shifting costs.
- 85. Finally, dominant carrier rules do not address the competitive concerns raised by the Commission. These rules are designed largely to prevent anticompetitive price increases, but competitive concerns relating to manipulation of access focus primarily on predatory price reductions and non-price discrimination.

I declare under penalty of perjury that the foregoing is true and correct to the best of our knowledge and belief.

Dennis W. Carlton

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June 30, 2003

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M.S., MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts: Operations Research, 1974.

A.B., HARVARD UNIVERSITY (Summa cum laude): Applied Math and Economics, 1972.

EMPLOYMENT

LEXECON INC., Chicago, Illinois (1977 - present): President, 1997 - 2001.

UNIVERSITY OF CHICAGO, Graduate School of Business (1984 - present): Professor of Economics.

UNIVERSITY OF CHICAGO, Law School (1980 - 1984): Professor of Economics.

UNIVERSITY OF CHICAGO, Department of Economics: Assistant Professor (1976 - 1979): Associate Professor (1979 - 1980).

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts, Department of Economics (1975 - 1976): Instructor in Economics.

OTHER PROFESSIONAL EXPERIENCE

HARVARD UNIVERSITY, Public Policy Summer Course in Economics (1977): Professor.

BELL TELEPHONE LABORATORIES (Summers 1976, 1977).

JOINT CENTER FOR URBAN STUDIES OF M.I.T. AND HARVARD UNIVERSITY, Cambridge, Massachusetts (1974 - 1975).

CHARLES RIVER ASSOCIATES, Cambridge, Massachusetts (Summers 1971, 1972): Research Assistant.

FIELDS OF SPECIALIZATION

Theoretical and Applied Microeconomics Industrial Organization

ACADEMIC HONORS AND FELLOWSHIPS

M.I.T., National Scholar Award, 1968
Edwards Whitacker Award, 1969
Detur Book Prize, 1969.
John Harvard Award, 1970
Phi Beta Kappa, 1971
National Science Foundation Fellowship, 1972 - 1975
Recipient of Post-doctoral Grant from the Lincoln Foundation, 1975
National Science Foundation Grant, 1977 - 1985
Recipient of the 1977 P.W.S. Andrews Memorial Prize Essay, best essay in the field of Industrial
Organization by a scholar under the age of thirty
Ph.D. Thesis chosen to appear in the Garland Series of Outstanding Dissertations in Economics
Alexander Brody Distinguished Lecture, Yeshiva University, 2000

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Co-editor, Journal of Law and Economics, 1980 - present
Associate Editor, Regional Science and Urban Economics, 1987 - 1997
Associate Editor, The International Journal of Industrial Organization, 1991 - 1995
Member, American Economics Association, Econometrics Society
National Bureau of Economic Research, Research Associate
Member, Advisory Committee to the Bureau of the Census, 1987 - 1990
Editorial Board, Intellectual Property Fraud Reporter, 1990 - 1995
Consultant on Merger Guidelines to the U.S. Department of Justice, 1991 - 1992
Accreditation Committee, Graduate School of Business, Stanford University, 1995
Visiting Committee, MIT, Department of Economics, 1995 - present
Resident Scholar, Board of Governors of the Federal Reserve System, Summer, 1995
Member, Advisory Board, Economics Research Network, 1996 - present
Member, Steering Committee, Social Science Research Council, Program in Applied Economics, 1997 - 1999
Participant in meetings with Committee of the Federal Reserve on Payment Systems, June 5, 1997

Participant in meetings with Committee of the Federal Reserve on Payment Systems, June 5, 1997

Participant in roundtable discussions on "The Role of Classical Market Power in Joint Venture Analysis," before the Federal Trade Commission, November 19, 1997 and March 17, 1998.

Member, Advisory Board of Antitrust and Regulation Abstracts, Social Science Research Network, 1998 -

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Participant in the Round Table on the Economics of Mergers Between Large ILECS before the Federal Communications Commission, February 5, 1999.

Advisory Board, Massachusetts Institute of Technology, Department of Economics, 1999 - present Chairman, FTC Round Table on Empirical Industrial Organization (September 11, 2001)
Professor, George Mason Institute for Judges, October 2001

BOOKS

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 Department of Justice, Drug Enforcement Administration, Docket No. 78-13, March 13, 1980 and
 May 1980 (Oral).
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 Proceedings before the Federal Trade Commission, Docket No. 9128, November 10 & 11, 1980 (Deposition), November 13 & 14, 1980 (Testimony), and February 20, 1981 (Rebuttal).
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 <u>Regal Tube Company. The Yoder Company v. David F. Grohne (counter-defendant)</u>: In the U.S. District Court for the Northern District of Illinois, Eastern Division, No. 76 C 4201, January 24, 1981.
- Affidavit of Dennis W. Carlton in Re: Ellis Banking Corporation, Ellis First National Bank of Bradenton, and Ellis First Security Bank v. Barnett Banks of Florida, Inc., Barnett Bank of Manatee County, and Westside National Bank of Manatee County: In the U.S. District Court for the Middle District of Florida, Tampa Division, No. 81-693-Civ-T-H, July 28, 1981.
- Deposition and Economic Report of Dennis W. Carlton in Re: Schneider Industrial Sales and Service

 Company, William Schneider and Mary Emily Schneider v. Acco Industries, Inc.: In the U.S.

 District Court for the District of New Jersey, April 19, 1982.

- Deposition and Testimony of Dennis W. Carlton in Re: <u>City of Batavia, et al. v. Commonwealth Edison</u>
 <u>Company</u>: Proceedings before the U.S. District Court, Northern District of Illinois, Eastern
 Division, No. 76 C 4388, May 17, 18 & 25, 1982 (Deposition), and July 22, 1982 (Testimony).
- Deposition of Dennis W. Carlton in Re: M. K. Metals Inc., et al. v. National Steel Corporation: In the U.S. District Court for the Northern District of Illinois, Eastern Division, No. 79 C 1661, September 15, 1983.
- Declaration and Deposition of Dennis W. Carlton in Re: <u>Carter Hawley Hale Stores, Inc. v. The Limited</u>, <u>Inc., et al.</u>: In the U.S. District Court, Central District California, No. CV 84 22000 AWT (JRX), April 21, 1984 (Declaration), and April 23, 1984 (Deposition).
- Verified Statements and Testimony of Dennis W. Carlton in Re. <u>Denver & Rio Grande Western Railroad v. Santa Fe Southern Pacific Corporation et al</u>: Proceedings before the Interstate Commerce Commission, Docket No. 30400, August 28, 1984, November 14, 1984, and May 22, 1985, (Statements), and January 30, 1985, and June 19, 1985, (Testimony).
- Affidavit of Dennis W. Carlton and William M. Landes in Re: <u>United States of America v. Western</u>
 <u>Electric Company. Inc. and American Telephone and Telegraph Company</u>: In the United States
 District Court for the District of Columbia, December 19, 1984.
- Statement of Carlton, DeMuth, Landes, and Rosenfield in Response to the National Telecommunications Information Administration (NTIA) Request for Comments in Connection with the Comprehensive Study of the Structure and Regulation of the U.S. Telecommunications Industry, March 29, 1985.
- Deposition and Affidavit of Dennis W. Carlton in Re: <u>L&W Industries</u>, Inc. v. American Standard, Inc.: In the U.S. District Court, Eastern District of Wisconsin, Civil Action No. 81-C-1409, May 14, 1985 (Deposition) and August 30, 1985 (Affidavit).
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 Application: Proceedings before the U.S. Department of Justice, Drug Enforcement

 Administration, Docket No. 84-51, May 31, 1985.
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 Proceedings before the U.S. Department of Transportation, Docket No. 43065, August 7, 1985.
- Deposition of Dennis W. Carlton in Re: General Motors "THM 200" Transmission Litigation:

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- Affidavit of Dennis W. Carlton in Re: Norwest Bank Fire Case: Proceedings before the U.S. District Court, Fourth Judicial District, State of Minnesota, Court File No. 83-08122, August 28, 1986.
- Affidavit of Dennis W. Carlton in Re: <u>Policy and Rules Concerning Rates for Dominant Carriers</u>: Before the Federal Communications Commission, Washington, D.C., Docket No. 87-313, October 16, 1987.

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 <u>University, et al.</u>: In the U.S. District Court For the Eastern District of Pennsylvania, Civil Action No. 91-CV-3274, February 18 & 19, 1992 (Deposition), April 28, 1992 (Affidavit), and July 8 & 9, 1992 (Testimony).
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 No. CIV 83-2501 JMI, March 10 & 11, 1992.
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- Deposition and Testimony of Dennis W. Carlton in Re: Adcom, Incorporated, Cutrone Communications, Incorporated, Great Southern Communications Incorporated, Nola Communications Incorporated and Conrad Communications, Incorporated v. Nokia Corporation, Nokia-Mobira Ov, Nokia-Mobira, Incorporated, Nokia, Incorporated, Nokia Data Communications and Cue Paging Corporation: In the United States District Court for the Eastern District of Louisiana, Civil Action Number 90-4088, November 3 & 4, 1992 (Deposition), and February 9 & 10, 1993 (Testimony).
- Statement, Supplemental Statement and Deposition of Dennis W. Carlton in Re: <u>City of Dillingham, et al.</u> v. Western Pioneer, Inc., et al., and City of Nome v. Western Pioneer, Inc., et al.: In the United States District Court for the District of Alaska, No. A89-014 Civil (Consolidated for Pre-Trial Proceedings with No. N89-004 Civil), November 6, 1992 (Statement and Supplemental Statement) and November 24, 1992 (Deposition).

- Verified Statement of Dennis W. Carlton in Re: Kansas City Southern Industries, Inc., The Kansas City
 Southern Railway Company and K&M Newco, Inc. -- Control -- MidSouth Corporation,
 MidSouth Rail Corporation, MidLouisiana Rail Corporation, SouthRail Corporation and TennRail
 Corporation, Before the Interstate Commerce Commission, Finance Docket No. 32167, May
 1993.
- Verified Statements and Deposition of Dennis W. Carlton in Re: <u>Union Pacific Corporation, Union Pacific Railroad Company and Missouri Pacific Railroad Company -- Control -- Chicago and North Western Holdings Corp. and Chicago and Northwestern Transportation Company:</u> Before the Interstate Commerce Commission, Finance Docket No. 32133, May 24, 1993, June 21, 1993, and November 24, 1993 (Statements), and March 17, 1994, and July 26, 1994 (Deposition).
- Verified Statement of Dennis W. Carlton in Re: <u>Application of TTX Company and Certain Common Carriers by Railroad For Approval of Amendment of Pooling Agreement and Car Contract Extending Their Terms</u>, Before the Interstate Commerce Commission, Finance Docket No. 27590 (Sub-No. 2), November 19, 1993.
- Deposition of Dennis W. Carlton in Re: Merck & Co., Inc. v. Alcon Laboratories, Inc., In the United States District Court for the District of Delaware, No. C.A. 92-691, December 14, 1993.
- Deposition and Affidavit of Dennis W. Carlton in Re: Northwest Airlines. Inc. v. American Airlines, Inc., Before the United States District Court, District of Minnesota, Fourth Division, C.V. No. 4-91-539, February 22 & 23, 1994, May 16 & 17, 1995, and July 8, 1997 (Deposition); and February 20, 1995 and May 9, 1996 (Affidavit).
- Testimony of Dennis W. Carlton in Re: Florida Power & Light Company: Before the Federal Energy Regulatory Commission, Docket Nos. ER93-465-000, ER93-507-000, ER-93-922-000, and EL94-12-000, April 5, 1994, October 19, 1994, and June 22, 1995.
- Testimony of Dennis W. Carlton in Re: <u>The Matter of Touchfax Information Systems Inc. and Landis & Gyr Communications</u>: Before the American Arbitration Association, No. 13-T-133-00260-93, May 10, 1994.
- Affidavit and Declaration of Kenneth J. Arrow and Dennis W. Carlton in Re: <u>United States of America v.</u>

 <u>Western Electric Company, Inc., and American Telephone and Telegraph Company</u>: Before the United States District Court for the District of Columbia, Civil Action No. 82-0192, February 28, 1994 (Affidavit), and May 30, 1995 (Declaration).
- Affidavit and Testimony of Dennis W. Carlton and Alan S. Frankel in Re: Leonard R. Kahn v. Emerson Electric Co., a Missouri corporation; Hazeltine Corporation, a Delaware corporation; and Motorola, Inc., a Delaware corporation; John Doe corporations 1-x; and John Does 1-x, individually; Before the United States District Court, for the Eastern District of New York, 92 Civ. 3063 (ADS), October 20, 1994 (Affidavit), and May 22, 1995 (Testimony).
- Deposition and Testimony of Dennis W. Carlton in Re: <u>Federal Trade Commission v. B.A.T. Industries P.L.C.</u>, Brown and Williamson Tobacco Corporation; American Brands, Inc.; and American <u>Tobacco Company</u>, Before the United States District Court, Southern District of New York, C.V. No. 94 Civ. 7849, November 20, 1994 (Deposition), and December 14, 1994 (Testimony).

- Affidavit, Supplemental Affidavit and Deposition of Dennis W. Carlton in Re: Weatherford Roofing

 Company v. Employers National Insurance Company and Employers Casualty Company et al: In
 the United States District Court for the District of Dallas County, Texas, 116th Judicial District,
 No. 91-05637, May 5, 1995 (Affidavit), May 9-10 & June 1, 1995 (Deposition), and October 20,
 1995 (Supplemental Affidavit).
- Affidavit of Dennis W. Carlton in Re: <u>Airline Travel Agency Commission Antitrust Litigation</u>: In the United States District Court for the District of Minnesota, No. 4-95-107, June 14, 1995.
- Declaration of Dennis W. Carlton in Re: <u>Donnelly Corporation v. Gentex Corporation</u>: In the United States District Court for the Western District of Michigan, Southern Division, Case No. 1:93 CV 530, October 20, 1995.
- Testimony of Dennis W. Carlton before the Federal Trade Commission Hearings on Global and Innovation-based Competition, October 25, 1995.
- Report and Deposition of Dennis W. Carlton in Re: <u>Brand Name Prescription Drugs Antitrust Litigation</u>, In the United States District Court for the Northern District of Illinois, Eastern Division, MDL No. 997, November 20, 1995 (Report), December 18 & 19, 1995 (Deposition).
- Expert Report and Deposition of Dennis W. Carlton in Re: Johnson Matthey v. General Motors (Antitrust Counterclaim), District Court for the Eastern District of Wisconsin, No. 93 C 0931, January 9, 1996 (Expert Report), February 14, 1996 (Deposition).
- Brief of Evidence, Summary of Evidence, and Testimony of Dennis W. Carlton on Behalf of Defendants in Re: Shell (Petroleum Mining) Company Limited and Todd Petroleum Mining Company

 Limited v. Kapuni Gas Contracts Limited and Natural Gas Corporation of New Zealand Limited,
 In the High Court of New Zealand, Auckland Registry, Commercial List, CL 5/94, April 2, 1996

 (Brief of Evidence), July 18, 1996 (Summary of Evidence), and July 18-19, 1996 (Testimony).
- Expert Report, Deposition, and Testimony of Dennis W. Carlton in Re: The Matter of the Arbitration Between Sprint Communications Company L.P. and Network 2000 Communications

 Corporation, Arbitration Case Number 57 181 0013 94, July 15, 1996 (Expert Report with H. Sider), August 12, 1996 (Deposition), and September 27, 1996 (Testimony).
- Testimony and Prepared Statement of Dennis W. Carlton on behalf of Sacramento Municipal Utility
 District in Re: Pacific Gas & Electric Company, San Diego Gas & Electric Company, and
 Southern California Edison Company: Before the Federal Energy Regulatory Commission
 Technical Conference on Market Power & Transmission Pricing, Docket Nos. ER96-1663-000,
 EC96-19-000, EL96-48-000, September 12, 1996.
- Declaration of Dennis W. Carlton in Re: <u>United States of America v. International Business Machines</u>: In the United States District Court for the Southern District of New York, Civil Action No. 72-344 (AGS), November 12, 1996.

- Expert Report, Affidavit Rebuttal and Deposition of Dennis W. Carlton in Re: Bell Atlantic Corporation and DSC Communications Corporation v. AT&T Corporation and Lucent Technologies Inc., Civil Action No. 5-96CV45, December 4, 1996 (Expert Report with R.E. Olley and D.S. Sibley), January 10, 1997 (Affidavit Rebuttal with R.E. Olley and D.S. Sibley), and January 21, 1997 (Deposition).
- Affidavit of Dennis W. Carlton in Re: Pacific Gas & Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company: United States of America Before the Federal Energy Regulatory Commission, FERC Docket No. ER96-1663-000, January 16, 1997 (with GE. Bamberger).
- Affidavit of Dennis W. Carlton in Re: Advanta Corp., Advanta National Bank U.S.A., and Advanta

 National Bank v. Visa U.S.A., Inc. and Mastercard International, Inc.: In the United States

 District Court for the Eastern District of Pennsylvania, Civil Action No. 96-CV-7940, January 21, 1997.
- Deposition, Testimony, and Surrebuttal Testimony of Dennis W. Carlton in Re: In the Matter of Toys "R"

 <u>Us. Inc.</u>: In the United States of America Before the Federal Trade Commission, File No. 9278,

 March 16, 1997 (Deposition), April 16 and 25, 1997 (Testimony), and June 3, 1997 (Surrebuttal Testimony).
- Deposition of Dennis W. Carlton in Re: In the Matter of Theresa Aguilar, et al vs. Atlantic Richfield

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- Report of Dennis W. Carlton in Re: Few Ready Mix Concrete Co., v. Transit Mix Concrete & Materials Co., et al: In the United States District Court for the Eastern District of Texas Lufkin Division, No. 9:96-CV-86, October 31, 1997 (with W. J. Lynk).
- Verified Statement, Depositions, Verified Reply Statement, and Verified Rebuttal Statement of Dennis W. Carlton in Re: <u>CF Industries, Inc. v. Koch Pipeline Company, L.P.</u>: In the United States of America Before the Department of Transportation Surface Transportation Board, No. 41685, November 7, 1997 (Verified Statement), December 19, 1997 (Deposition), January 8, 1998 (Verified Reply Statement), February 3, 1998 (Deposition), and February 20, 1998 (Verified Rebuttal Statement).
- Expert Witness Report, Deposition and Affidavits of Dennis W. Carlton in Re: <u>Industrial Silicon Antitrust Litigation</u>: In the United States District Court for the Western District of Pennsylvania, No. 95-2104, January 9, 1998 (Expert Witness Report), February 10-11, 1998 (Deposition), April 8, 1998 (Affidavit), and June 29, 1998 (Affidavit).
- Declaration of Dennis W. Carlton in Re: <u>Applications of WorldCom, Inc. and MCI Communications</u>
 <u>Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.</u>:
 Before the Federal Communications Commission, CC Docket No. 97-211, January 25, 1998
 (with H. Sider)

- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Bepco, Inc., et al v. AlliedSignal Inc. and AlliedSignal Truck Brake System Co.</u>: In the United States District Court for the Middle District of North Carolina, Winston-Salem Division, No. 6:96CV00274, February 3, 1998 (Expert Report) and March 3, 1998 (Deposition).
- Affidavit of Dennis W. Carlton in Re: <u>Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.</u>: Before the New York State Public Service Commission, No. 97-C-1804, February 16, 1998 (with H. Sider).
- Affidavit of Dennis W. Carlton in Re: Petition of WorldCom. Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom. Inc.: Before the Florida Public Service Commission, No. 971375-TP, February 27, 1998 (with H. Sider).
- Second Declaration of Dennis W. Carlton in Re: Applications of WorldCom, Inc. and MCI

 Communications Corporation for Transfer of Control of MCI Communications Corporation to

 WorldCom, Inc.: Before the Federal Communications Commission, CC Docket No. 97-211,

 March 19, 1998 (with H. Sider).
- Affidavit, Reports, Reply Affidavit, Reply Report, Prepared Statements and Testimony of Dennis W. Carlton in Re: The Merger of SBC Communications Inc. with Ameritech Corporation: Before the Federal Communications Commission, CC Docket No. 98-141, July 20, 1998 (Affidavit and Report), November 12, 1998 (Reply Affidavit and Reply Report), February 5, 1999 (Prepared Statements and Testimony as a Participant in the Round Table on the Economics of Mergers Between Large ILECS), April 13, 1999 (Report to the FCC on Supplemental Analysis of the Katz/Salop Hypothesis).
- Report and Supplemental Report of Dennis W. Carlton in Re: <u>Riverside Pipeline Company v. Panhandle Eastern Pipeline Company</u>: In the U.S. District Court for the Western District of Missouri, No. 97-0642-CV-W-4, September 20, 1998 (Report with H. Sider) and January 7, 1999 (Supplemental Report).
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- Report and Deposition of Dennis W. Carlton in Re: <u>The Procter & Gamble Company. et al. vs. Amway Corporation, et al.</u> In the U.S. District Court for the Southern District of Texas, Houston Division, January 8, 1999 (Report) and February 9, 1999 (Deposition).
- Responsive Direct Testimony and Prepared Answering Testimony of Dennis W. Carlton for Intervenor Oklahoma Gas and Electric Company in Re: <u>Joint Application of American Electric Power Company, Inc., Public Service Company of Oklahoma and Central and South West Corporation Regarding Proposed Merger:</u> Before the Corporation Commission of the State of Oklahoma, Cause No. PUD 980000444, March 29, 1999 (with G Bamberger).

- Report and Declaration of Dennis W. Carlton in Re: <u>Telnet Communications</u>, Inc., et al. v. WorldCom, <u>Inc.</u>, et al.: In the United States District Court for the Southern District of Texas, Houston Division, No. H-98-2020, March 30, 1999 (Report) and April 28, 1999 (Declaration).
- Prepared Answering Testimony and Exhibits of Dennis W. Carlton on Behalf of Oklahoma Gas and Electric Company in Re: American Electric Power Company, Inc. and Central and South West Corporation: United States of America Before the Federal Energy Regulatory Commission, FERC Docket Nos. ER98-40-000, ER98-2770-000, ER98-2786-000, April 27, 1999 (with G Bamberger).
- Expert Report, Deposition and Supplemental Report of Dennis W. Carlton in Re: <u>United States of America vs. American Society of Composers, Authors and Publishers in the Matter of the Application of Turner Broadcasting Systems Inc. for the Determination of Reasonable License Fees: Before the United States District Court, Southern District of New York, Civ. 13-95 (WCC) (Referred to Magistrate Judge Dolinger), April 15, 1999 (Expert Report), July 28-29 and August 5, 1999 (Deposition), and December 16, 1999 (Supplemental Report).</u>
- Declaration, Deposition and Reply Declaration of Dennis W. Carlton in Re: <u>Visa Check/MasterMoney Antitrust Litigation</u>: Before the United States District Court, Eastern District of New York, No. CV 96-5238 (JB) RLM), April 15, 1999 (Declaration), May 25, 1999 and June 1, 1999 (Deposition), and August 1, 1999 (Reply Declaration).
- Report and Deposition of Dennis W. Carlton in Re: Zeneca Limited, Zeneca Holdings Inc., and Zeneca Inc. v. Rhone-Poulenc Inc. and Rhone-Poulenc AG Company: In the United States District Court for the District of Delaware, No. 97-652-GMS, May 17, 1999 (Report) and June 16, 1999 (Deposition).
- Affidavit and Reply Affidavit of Dennis W. Carlton in Re: Andersen Consulting Business Unit Member Firms v. Arthur Andersen Business Unit Member Firms and Andersen Worldwide Societe

 Cooperative: Before the International Court of Arbitration of the International Chamber of Commerce, No. 9797/CK, June 2, 1999 (Affidavit) and September 13, 1999 (Reply Affidavit).
- Affidavit, Report, Rebuttal Report, Reply Report, Rebuttal Report and Testimony of Dennis W. Carlton in Re: The Commissioner of Competition and Superior Propane Inc. and ICG Propane Inc.: Before The Competition Tribunal, No. CT-98/2, August 17, 1999 (Affidavit and Report), September 14, 1999 (Rebuttal Report with G Bamberger), September 19, 1999 (Reply Report with G Bamberger), September 27, 1999 (Rebuttal Report to Professor Michael Ward with G Bamberger), and December 13-14, 1999 (Testimony with G Bamberger).
- Declaration of Dennis W. Carlton in Re: Merger of Owest Communications International Inc. and U S

 WEST, Inc.: Before the Federal Communications Commission, CC Docket No. 99-272, October 18, 1999 (with Hal Sider).
- Prepared Direct Testimony, Deposition and Cross-Examination of Dr. Dennis W. Carlton on behalf of Sierra Pacific Power Company in Re: <u>United States of America Before the Federal Energy</u>

 <u>Regulatory Commission</u>: Docket Nos. ER99-28-001, ER99-28-003, EL99-38-002 and ER99-945-002, November 17, 1999 (Prepared Direct Testimony), January 10, 2000 (Deposition), and April 26 and May 1, 2000 (Cross-Examination).

- Expert Report and Deposition of Dennis W. Carlton in Re: <u>United States of America v. Northwest Airlines Corporation and Continental Airlines, Inc.</u>: In the United States District Court for the Eastern District of Michigan, Southern Division, Civil Action No. 98-74611, January 27, 2000 (Expert Report) and June 7, 2000 (Deposition).
- Declaration and Ex Parte Declaration of Dennis W. Carlton in Re: <u>Joint Applications of MCI WorldCom</u>, <u>Inc.</u>, and <u>Sprint Corporation for Consent to Transfer Control</u>: Before the Federal Communications Commission, CC Docket No. 99-333, February 18, 2000 (Declaration with H. Sider), and May 10, 2000 (Ex Parte Declaration with H. Sider).
- Testimony, Rebuttal Testimony and Cross-Examination of Dennis W. Carlton on behalf of Sacramento Municipal Utility District in Re: <u>Application of Pacific Gas and Electric Company to Market Value Hydroelectric Generating Plants and Related Assets Pursuant to Public Utilities Code Sections 367(b) and 851: Before the Public Utilities Commission of the State of California, application No. 99-09-053, March 2, 2000 (Testimony), March 16, 2000 (Rebuttal Testimony) and May 9, 2000 (Cross-Examination).</u>
- Affidavit, Deposition and Reply Affidavit of Dennis W. Carlton in Re: Gregory F. Daniel, M.D., et al., v. American Board of Emergency Medicine, et al: In the United States District Court for the Western District of New York, Civil Action No. 90-CV-1086A, March 3, 2000 (Affidavit), April 17 and 18, 2000 (Deposition), and July 12, 2000 (Reply Affidavit).
- Expert Report, Reply Expert Report, Deposition and Supplemental Report of Dennis W. Carlton in Re:

 <u>CSX Transportation, Inc. V. Qwest Communications International, Inc.</u>: In the United States
 District Court for the Middle District of Florida, Jacksonville Division, Civil Action No. 99-412CIV-J-21C, July 19, 2000 (Expert Report), October 11, 2000 (Reply Expert Report), January 1011, 2001 (Deposition), and July 18, 2001 (Supplemental Report).
- Reply Declaration of Dennis W. Carlton in Re: <u>Joint Application of Northpoint Communications and Verizon Communications for Authority to Transfer Control of Blanket Authorization to Provide Domestic Interstate Telecommunications Services as a Non-Dominant Carrier: Before the Federal Communications Commission, Washington DC, Docket No. 00-157, October 17, 2000 (with H. Sider).</u>
- Declaration and Reply Declaration of Dennis W. Carlton in Re: In the Matter of Inquiry Concerning

 High-Speed Access to the Internet Over Cable and Other Facilities: Before the Federal

 Communications Commission, Washington DC, Docket No. 00-195, December 1, 2000

 (Declaration with K. Arrow and G Becker), and January 10, 2001 (Reply Declaration with K. Arrow and G Becker).
- Report, Rebuttal Report and Deposition of Dennis W. Carlton in Re: Rambus Inc. v. Infineon

 Technologies AG, Infineon Technologies North America Corp., Infineon Technologies, Inc.,

 Infineon Technologies Holding North America Corp., and Infineon Technologies Corp.: In the

 United States District Court for the Eastern District of Virginia, Richmond Division, Civil Action
 No. 3:00CV524, December 20, 2000 (Report), January 19, 2001 (Rebuttal Report), and February
 6, 2001 (Deposition).

- Reports, Rebuttal Reports, Deposition and Declaration of Dennis W. Carlton in Re: Micron Technology, Inc. v. Rambus Inc.: In the United States District Court for the District of Delaware, Civil Action No. 00-792, March 28, 2001 (Report), April 13, 2001 (Rebuttal Report), April 18, 2001 (Deposition), and August 17, 2001 (Report), September 17, 2001 (Rebuttal Report), and Declaration (October 1, 2001).
- Expert Report, Deposition and Testimony of Dennis W. Carlton in Re: <u>Amgen Inc. v. Ortho</u>

 <u>Pharmaceutical Corp.</u>: Endispute Arbitration, Chicago, Illinois, August 31, 2001 (Expert Report),
 November 27-28, 2001 (Deposition), and May 9-10, 2002 (Testimony).
- Testimony of Dennis W. Carlton in Re: <u>Empirical Industrial Organization Roundtable</u>: Before the Federal Trade Commission, Matter No. P015602 (September 11, 2001).
- Expert Report of Dennis W. Carlton in Re: <u>Artemio Del Serrone, et al. v. Philip Morris Companies, Inc.</u>, <u>et al.</u>: In the Circuit Court for the County of Wayne, State of Michigan, No. 00-004035 CZ, December 19, 2001.
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Cigarette Price-Fixing Litigation and related cases, Holiday Wholesale Grocery Company, et al. v. Philip Morris Incorporated, et al.</u>: In the United States District Court for the Northern District of Georgia, Atlanta Division, No. 1:00-CV-0447-JOF, MDL No. 1342, December 19, 2001 (Expert Report) and January 23, 2002 (Deposition).
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Flat Glass Antitrust Litigation</u>: In the United States District Court for the Western District of Pennsylvania, No. 97-550, MDL NO. 1200, December 20, 2001 (Expert Report) and February 4-6, 2002 (Deposition).
- Expert Report, Supplemental Expert Report, and Deposition of Dennis W. Carlton in Re. Symbol

 Technologies et al v. Lemelson Medical et al and Cognex Corporation v. Lemelson Medical et al:

 In the United States District Court, District of Nevada, CV-S-01-701-PMP (RJJ) and CV-S-01-702-PMP (RJJ), December 14, 2001 (Expert Report), May 7, 2002 (Supplemental Expert Report), and October 3, 2002 (Deposition).
- Declaration and Reply Declaration of Dennis W. Carlton in Re: Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services: Before the Federal Communications Commission, Washington DC, CC Docket No. 01-337, FCC 01-360, March 1, 2002 (with H. Sider), and April 22, 2002 (with H. Sider and G Bamberger).
- Declaration, Deposition, Reply Declaration, and Preliminary Injunction Hearing Testimony of Dennis W. Carlton in Re: Sun Microsystems Inc. v. Microsoft Corporation: In the United States District Court, Northern District of California, San Jose Division, Civil Action No. C 02-01150 RMW (PVT), March 8, 2002 (Declaration), June 27, 2002 (Deposition), August 9, 2002 (Reply Declaration), and December 4, 2002 (Preliminary Injunction Hearing Testimony In the United States District Court for the District of Maryland, Northern Division, MDL No. 1332).

- Declaration of Dennis W. Carlton in Re: In the Matter of Applications for Consent to the Transfer of

 Control of Licenses, Comeast Corporation and AT&T Corp., Transferors, to AT&T Comeast

 Corporation, Transferee: Before the Federal Communications Commission, Washington, D.C.,
 MB Docket No. 02-70, April 26, 2002
- Declaration of Dennis W. Carlton and Robert H. Gertner In Re Shirley Robinson, et al., v. Bell Atlantic Corporation d/b/a Verizon Communications, et al., United States District Court Eastern District of Kentucky, Lexington Division, Case No. 01-98. (08/30/02)
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Duramed Pharmaceuticals, Inc. v. Wyeth-Ayerst Laboratories, Inc.</u>: In the United States District Court, Southern District of Ohio, Western Division at Cincinnati, Civil Action No. C-1-00-735, August 19, 2002 (Expert Report) and September 24, 2002 (Deposition).
- Expert Report and Deposition of Dennis W. Carlton in Re: <u>Philip Morris, Inc.</u>: In the United States District Court for the District of Columbia, No. 99-CV-02496 (GK), May 10, 2002 (Expert Report) and September 10, 2002 (Deposition).
- Affidavit of Dennis W. Carlton in Re: <u>USG Corporation</u>, a <u>Delaware Corporation</u>, et al., In the United States Bankruptcy Court for the District of Delaware, Case No. 01-2094 (RJN), August 20, 2002 (Affidavit).
- Expert Report, Expert Rebuttal Report, and Discovery Deposition of Dennis W. Carlton in Re: <u>Sarah</u>

 <u>Futch Hall, d/b/a Travel Specialist, et al.</u>, on behalf of themselves and all others similarly situated

 <u>v. United Airlines, Inc., et al.</u>: In the United States District Court for the Eastern District of North

 Carolina Southern Division, No. 7:00-CV-123-BR(1), October 4, 2002 (Expert Report),

 November 13, 2002 Expert Rebuttal Report, and November 21, 2002 (Discovery Deposition).
- Initial Report of Dennis W. Carlton and Hal Sider in Re: Sunrise International Leasing Corp., v. Sun Microsystems Inc., In the United States District Court for the District of Minnesota, Civil Action No. 01-CV-1057 (JMR/FLN), March 27, 2003 (Initial Report).

HAL SIDER April 2003

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Ph.D., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1980.

M.A., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1978.

B.A., UNIVERSITY OF ILLINOIS, Urbana, Illinois: Economics, 1976.

EMPLOYMENT

- LEXECON INC., Chicago, Illinois (October 1985 present): 1985-90: Economist; 1990-1999: Vice President; 1999-current: Senior Vice President.
- U.S. COMMISSION ON CIVIL RIGHTS, Washington, D.C., (August 1984 October 1985): Co-Director: Project on Minority Income Trends.
- OFFICE OF POLICY: U.S. DEPARTMENT OF LABOR, Washington, D.C., (May 1982 August 1984): Economist.
- PRESIDENT'S TASK FORCE ON FOOD ASSISTANCE (on leave from U.S. Department of Labor), Washington, D.C., (September 1983 February 1984): Research Associate.
- OFFICE OF RESEARCH AND EVALUATION; BUREAU OF LABOR STATISTICS, Washington, D.C., (September 1980 May 1982): Economist.
- UNIVERSITY OF WISCONSIN, Madison, Wisconsin (1978 79): Teaching Assistant.
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